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# THE Chemist

August, 1946



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## OBJECTIVES OF THE AMERICAN INSTITUTE of CHEMISTS

(1) *To provide and enforce a code of principles of professional conduct which merits public esteem and justifies confidence in the integrity of the Chemist;*

(2) *To establish and maintain a standard of proficiency of such excellence as to insure competent and efficient service;*

(3) *To secure an adequate basic training for the profession and admit to fellowship in the Institute only those of proved education, experience, competency and character.*

(4) *To strive to enhance the prestige and distinction of the profession and to extend its influence and usefulness;*

(5) *To establish and maintain a register of membership in which there shall be a complete record of the training, experience and fitness for service of each member;*

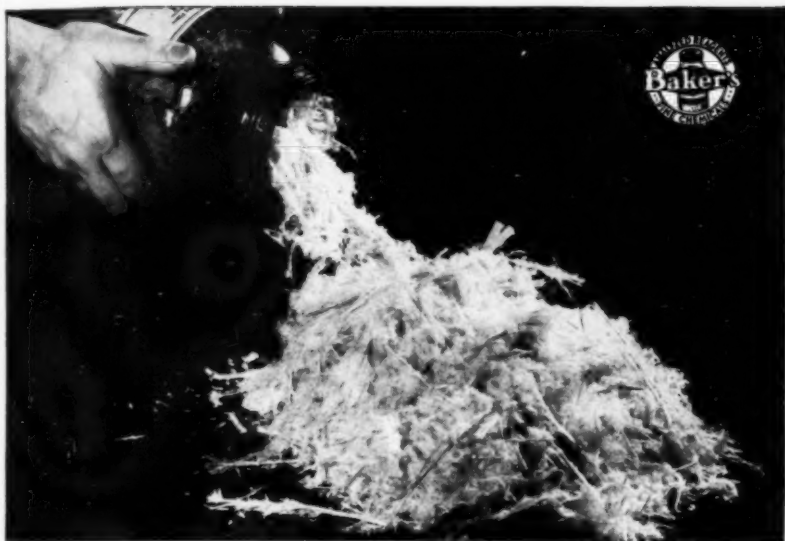
(6) *To seek to improve the economic status of the profession by cooperating with employers to secure a satisfactory appreciation and evaluation of the services of the chemist;*

(7) *To provide a means for the appropriate recognition of distinguished service rendered by individual members of the profession;*

(8) *To cooperate with all agencies serving chemistry to make the profession of chemistry a powerful factor in the advancement of intellectual and material progress in the United States to the end that this nation shall assume its rightful place as a leader among the nations of the world in scientific thought and accomplishment;*

(9) *To lend support to the work of the chemical societies in the education of the public to a better appreciation of the contribution of the chemist to world progress;*

(10) *To render such other services to the profession as developments shall warrant and which The American Institute of Chemists shall approve.*



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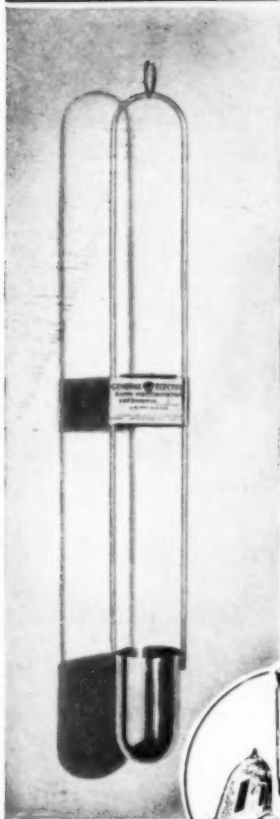
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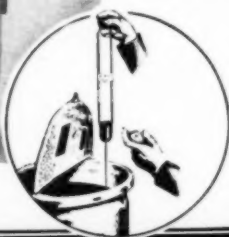
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# Termination of Employment

*A report of the A.I.C. Committee on Employer-Employee Relationships*

**I**N the past few months there has come to the attention of this Committee a considerable number of cases indicating a wide divergence in the practice followed by employers in releasing employed chemists. The situation appears sufficiently critical, for the reasons indicated below, to require action by THE AMERICAN INSTITUTE OF CHEMISTS.

Detailed discussion and this Committee's recommendation follow:

The facts appear to be these:

1. A considerable number of companies, either because of reorganizations or because of present uncertainties in the industrial picture, are releasing chemists.
2. A great diversity of practice obtains in this matter, ranging from the brutal to the generous.
3. Owing to the wait-and-see attitude prevailing, competent chemists frequently encounter long delays in relocating. This is especially true of older more specialized chemists in the higher salary brackets.
4. These delays, for which the chemists are not responsible, sap savings and lower morale and sometimes cause real hardship.

The harm done by such situations is not only economic but what, for

lack of a better name, may be called spiritual. More bitterness is caused by termination, without notice or warning, of creative work to which the chemist has devoted his time, energy, and enthusiasm, than is caused by inadequate notice of termination of employment.

This maladroitness in human relations on the part of certain managements cannot be cured quickly. But the INSTITUTE should undertake a program of long term education to the effect that *chemists are people* and that treating them as such pays dividends in the long run. On the whole, this seems better understood by firms with a technical-minded management than by those with a purely financial management.

The economic aspect of the situation, however, lends itself to quantitative definition and accordingly is more susceptible of early correction. The Committee recommends that the INSTITUTE go on record at once and give wide publicity to its position as follows:

- A. THE INSTITUTE recognizes that many employed chemists are subjected to undue hardships by reason of inadequate notice of termination of employment when they are released for reasons other than personal de-

reliction. There is little uniformity in this matter, practice with different firms ranging from generous to parsimonious.

B. In order to secure a reasonable uniformity in this and to ensure that the employer assume a fair share of the business risk involved, the INSTITUTE presents the following program which it considers a norm of fair practice between employer and employed chemist:

- a. Every chemist should be hired by written contract.
- b. When such contract is not for a definite term (e.g. 1 year, 5 years), it should run until terminated by either party under specified conditions.
- c. The conditions of termination should provide for adequate minimum notice if terminated by the chemist, depending on the responsibilities of his position (e.g. 2 weeks, 1 month, 3 months), and for adequate notice or severance pay, if terminated by the employer otherwise than for breach of contract. The following schedule is be-

lieved to represent fair practice in the average case, although it is recognized that many special conditions in individual cases may justify or require deviations e.g., location and accessibility of work, special character of work, etc.

Whether or not the chemist should be kept actively employed after notice of termination should be at the option of the employer; if he is so retained he should be allowed adequate free time to look for new employment.

- d. In cases of alleged dereliction or breach of contract by the chemist, he should be given a fair hearing by management.
- e. The contract should provide that it is not voided as respects the above provisions by increases in pay or other agreed - on changes in employment conditions.

Respectfully submitted,  
E. H. Northey, *Chairman*  
M. L. Hamlin  
J. M. McIlvain  
G. L. Royer  
Foster D. Snell

---

Notice of Termination  
of Employment

*Length of Employment*

less than 1 year  
1 - 2 years  
3 - 10 years  
more than 10 years

---

*Minimum Advance Notice  
of Termination*

2 weeks  
1 month  
 $\frac{1}{2}$  month for each year of  
6 months employment

# Regarding the Standard of Patentable Inventions

John A. Dienner, F.A.I.C.

*Brown, Jackson, Boettcher and Dienner, Chicago, Ill.*

ONE encounters comment on the phenomenon of the Patent Office granting patents which when brought into controversy are declared by the Court not to involve invention. Brushing aside the question of defective examination, that is, failure to cite the best prior art, it is a fact that the Patent Office consistently grants some patents which are successfully challenged in the Courts on the ground that they do not involve invention.

There is no definition of invention as such in the decisions of either the Courts or the Patent Office, except such as may be negative in character. However, in the Patent Office, the applicant who can show a difference over the prior art in structure and mode of operation or result secures a sympathetic consideration and usually prevails in securing the grant of a patent.

Because it seems that a greater proportion of patents have been invalidated in recent years on the ground of lack of invention, it has become a popular pastime to complain that there are different so-called

"standards of patentable invention" in the Patent Office and in the Courts, overlooking completely the dissimilar functions and modes of procedure of the Patent Office and the Courts in respect to their connection with patents.

The Patent Office performs the distinct function of creating property in an invention by way of the patent grant, and operates as an administrative bureau under *administrative procedure* to administer statutory law.<sup>(1)</sup>

The Courts employ *judicial procedure* to do justice according to the general body of law which follows the principles of the common law, long antedating the statutory law relating to patents, and perform the function of deciding justiciable issues between parties in controversy. Since the purpose, the procedure, the governing body of law, and the end re-

(1). Since invention cannot be defined, it is impossible to prove solely by judicially acceptable evidence the presence of invention, hence the administrative procedure which depends largely upon the judgment of the administrator and his familiarity with the subject matter, is adopted. The decision of the administrator should then be allowed to stand except as it lacks rational support in the facts upon which it was made, or except as positive evidence to the contrary is introduced at the trial.

sults are different, it is difficult to see where anyone can justify a demand that the viewpoint of the two institutions must be the same in regard to the question of what constitutes invention to the extent that all patents granted must be sustainable in Court; or stated conversely, that the Patent Office should grant only patents which the Courts will sustain.

Obviously, if the Patent Office is failing to do its work properly by reason of inadequate or untrained personnel or antiquated methods, it needs better management—not a new standard of invention.

The Constitution provides the power to Congress to grant the patent to inventors to carry out an announced policy. Congress established the Patent Office as an administrative bureau to carry out the power of Congress to make such grants to inventors. The Patent Office instituted the system of examination of the novelty of inventions submitted in applications in order to avoid the improvident grant of patent to one who failed to present a new invention as a basis for the grant. The procedure of examining and granting patents stems entirely from the laws passed by Congress pursuant to the power granted to it in Article 1, Section 8 of the Constitution.

There is no common law of patents. The law of patents is in fact an exception to the common law which declared all monopolies to be

illegal. The so-called Statute of Monopolies 21, Jas. I (1623) specifically declared that all monopolies save only those which were granted for the introduction of new manufacture into the Kingdom were henceforth to be void and of no effect. That had been the common law prior to the statute of monopolies, and has been the general law ever since, in both England and America.

### Provisions for Patent Grant

Congress prescribed, in the statutory provisions respecting the granting of patents, the conditions under which a patent for an invention may be secured, and an applicant who has made an invention and conforms to these requirements secures his grant quite irrespective of the general law. It makes no difference that he is violating equitable doctrines of the common law or comes in with unclean hands, or has taken advantage of the confidence of another, or has done any of the things which might be regarded as contrary to the rights of others or to the public interest, so long as he conforms to the requirements of the statutory provisions. He may be a minor, or a foreigner, or he may make his invention in solitary confinement in the death cell in Murderers' Row. The Patent Office is authorized to look solely to the statutory requirements, and if they have been complied with, to grant the patent.

## REGARDING THE STANDARD OF PATENTABLE INVENTIONS

In brief, the Patent Office is the administrative arm of Congress, governed solely by the statutory provisions of the patent law for creating property in an invention by granting the patent to the first inventor. It has no other function. It has its own rule-making powers as an extension of the statutory law, governing the grant of patents, and it utilizes strictly an administrative procedure throughout.

### Function of the Courts

The Courts, on the other hand, are established and organized to administer justice. They can operate only in the event of a justiciable controversy between two or more parties. When it comes to the enforcement of patents, the Courts are obligated to recognize the grant made by Congress pursuant to the Constitutional provision, but the use of the patent is subject to all of the equitable doctrines of the common law. Such matters, for example, as unclear hands, laches, extension of the monopoly by the patentee, or misuse of the monopoly by the patentee, are all matters of which the Court must be cognizant in a suit to enforce the patent.

Similarly, the Courts pass upon controversies in respect to the rights of others in the monopoly, such, for example, as questions of title to the patent, or licenses thereunder. The decisions of the Courts therefore are are of an entirely different quality

from those of the Patent Office. The Court is organized to administer justice according to judicial procedure, and apply all the general doctrines of the law to the parties and to the subject matter. This includes enforcement of the exclusive property right in the patent, as well as questions affecting the title thereto or rights thereunder.

Now there is one thing in which the Courts have a duty which, while under the law it is assigned to the Patent Office, the Patent Office is incapable of performing, and the full burden thereof falls upon the Court. That is the question of public use or sale. The Patent Office has no access to facts determinative of public use defenses as such; and hence, except as the same are called to its attention by an adversary inventor or by volunteered information from an outsider, it will issue the patent upon compliance of the applicant with the other requirements of the statute, leaving to any interested member of the public the defense in Court of invalidity of the patent for failure to comply with the statute in respect to the prohibited prior public use or sale.

The Courts have the opportunity to consider the industrial history of an invention following its introduction, to ascertain its practical effect, if any, upon the art or science to which it relates. This the Patent Office generally cannot do. Since the "judgment of the market place" often

plays a decisive role in determining the question of invention, and properly so, apparent disagreement between the Patent Office and the Courts is to be expected.

It has become an established doctrine of law that the Courts have the right to inquire into the question of whether the applicant did in fact comply with all the requirements of the statutory law when the property in the invention, known as the patent, was created. Since one of the requirements of the statutory provisions is the presence of an invention upon which the grant is to be founded, the Courts have undertaken to pass upon the question of invention. Here they usurp the prerogative of Congress when they overrule without compelling evidence the judgment of the Patent Office. But that is another matter.

Since there can be no definition as such, and since in the last analysis every case must stand on its own peculiar facts, the question of invention frequently boils down to the personal judgment of the judge or of the majority of judges constituting the Court. While this subjective aspect of the matter has always been important, the recent tendency of the Courts to cut loose from precedent and to refashion the patent law has made it especially significant. This freehand improvisation may not be good, but it is real. And it goes far to account for the imputed gap be-

tween Patent Office and Courts.<sup>(2)</sup>

Moreover, the judges, unfortunately, are all too frequently not educated in technical subject matter to the point of being able to give an intelligent judgment based upon knowledge of the scientific principles underlying the invention in question. The more the Courts break away from established rules and methods of judging, the more dangerous it becomes to determine invention according to the personal views of individuals who are unable to detect the difference between truth and falsity in a proposition of scientific or technical fact involving an invention.

Anyone having had experience in Court realizes very quickly that the average judge is highly skilled in judgment of human nature, and can usually tell with certainty whether a witness is telling the truth or not. Telling the truth after all means telling that which the witness honestly

(2). Judge Learned Hand said in *Kirsch Mfg. Co. v. Gold Mersereau Co., Inc.* (6 Fed. 2d, 793, at 794):—

"An invention is a new display of ingenuity beyond the compass of the routine, and in the end that is all that can be said about it. Courts cannot avoid the duty of divining as best they can what the day to day capacity of the ordinary artisan will produce. This they attempt by looking at the history of the art, the occasion for the invention, its success, its independent repetition at about the same time, and the state of the underlying art, which was a condition upon its appearance at all. Yet, when all is said, there will remain cases when we can only fall back upon such good sense as we may have, and in these we cannot help exposing the inventor to the hazard inherent in hypostatizing such modifications in the existing arts as are within the limited imagination of the journeyman. There comes a point when the question must be resolved by a subjective opinion as to what seems an easy step and what does not. We must try to correct our standard by such objective reference as we can, but in the end the judgment will appear, and no doubt be, to a large extent personal, and in that sense arbitrary."

believes to be the fact. For example, suppose a follower of John Alexander Dowie should be on the witness stand and testify solemnly that the earth is flat. For him it is the truth. No amount of clever cross examination by opposing counsel, or keen observation by the trial judge, could arrive at any other conclusion than that the witness is telling the truth according to his own conviction. That would not reveal the fundamental falsity of the statement. The scientific fact of the world being round would have been known to the court in order to resolve conflicting testimony on the point.

### Need for Scientifically Informed Court

As every trial counsel knows, in the preparation of an important patent case, enormous care and expense is involved in preparing to uphold, explain, and if necessary, demonstrate every principle of science which may be brought into question in the trial of the case. If the Court could be depended upon for elementary knowledge of scientific principles in the subject matter involved, the preparation and trial of the average patent case could be greatly expedited and reduced in cost. Also the threat which exists in an improvidently granted patent would be very greatly reduced, if it were generally recognized (and the fact could be depended upon) that the Court, being familiar with scientific principles and the subject of

invention, would give the patent short shrift.

Much of the nuisance value inherent in patents exists because of the difficulty in demonstrating the invalidity of an improvidently granted Patent. Much of that difficulty lies in the unfamiliarity of the Court with scientific and technical matters.

The above constitute powerful reasons why the Courts, passing as they do upon the question of invention, should be re-constituted or manned by judges of attainments equivalent to those of the patent profession practicing before the Courts. One familiar with the situation knows that the attainment of competency in the practice of patent law involves scientific as well as legal training. The Courts themselves have commented upon the anomalous situation which allows a lay judge to pass upon highly scientific controversies. That the betterment of the system could be vastly promoted by so simple a step has been largely overlooked.

In the creation of the patent property in an invention, the Patent Office properly should and does resolve critical doubts on the question of invention in favor of the applicant. Under the administrative procedure this is inevitable and is wholly desirable. The stated policy being to grant patents for inventions in order to promote the progress of science and the useful arts, the proposition resolves into this, namely, that if the inven-

tion could become a step forward in science of the useful art, the patent should be granted. Every Tuesday, the *Official Gazette* carries notice of the grant of hundreds of patents, each of which constitute the creation of property in a certain invention defined therein. Many of them, in fact most of them, will expire, lying in an old trunk in an attic, never having made any more impression on science or the useful arts than the trunk in which they are contained, which also represents property no longer in the current of human events.

Many a patent which is not actually used, nevertheless stimulates another, by its publication and teaching, to arrive at a successful solution of the problem revealed in that patent. It fulfills its function as a publication and teaching to the extent of its contents, regardless of whether they are usable or not.

#### **Law Governing Use of Patent**

Now after the patent property has been created under the statutory law, and is turned out into the world, it becomes subject immediately to an entirely different legal environment. The use of the patent is governed by the general law which regulates the use of all property. For example, the use of property for a harmful purpose may bar its further enjoyment. The doctrine of unclean hands, of laches, of wrongful extension of the monopoly, of misuse of the monopoly of the patent, and other such similar

doctrines must all be regarded to the same extent that prevails in respect of the use of property in general.

The Courts have, particularly in the last fifteen years (since 1932) applied to the use of patents the above general legal and equitable doctrines to protect the public against the patentee in such situations where justice so demands.

In many cases the testimony adduced in Court as to the status of the prior art reveals the true state of the prior art to be more advanced than was considered by the Patent Office when the property was created. This is a sound basis for limiting the scope of the patent, or even denying its validity where the facts so warrant. The frequent invalidation or limitation of patents on this score does not so much involve the question of "standards of invention" as it does, instead, the adequacy of Patent Office examination.

Where a holding of non-invention in a patent proceeds on the identical state of the prior art which was considered by the Patent Office, with no additional testimony respecting the status of the prior art, the difference in outcome must reflect the difference in viewpoint of the individuals who passed upon the question of invention. Few cases actually fall in this category, but enough approach it to illuminate the problem.

The Examiner is scientifically trained. He generally has a detailed

## REGARDING THE STANDARD OF PATENTABLE INVENTIONS

and comprehensive knowledge of the patent art specifically in question. He is steeped in the question of invention and deals with it every day. The typical Federal Judge, on the other hand, lacks technical training. He hears patent cases infrequently, sometimes reluctantly. Lacking training or aptitude or interest in the technical aspects of the patent cases, these tend to suffer at his hands. To the extent that questions of invention turn upon adequate and accurate scientific understanding, he is at a great disadvantage as compared with the Patent Office Examiner. This handicap cannot but have its effect.

On the other hand, the judge does have some advantage over the Examiner. Some of these advantages have been noted. He has the opportunity to decide the question of invention in the light of what an invention has actually done to advance the art. He has the opportunity to hear thoroughly developed testimony as to public use and sale. He has the opportunity to hear expert testimony both for and against the patent, whereas the Examiner, generally unaided save by his libraries, often succumbs to a barrage of arguments and affidavits all drawn to support the grant of a patent.

But all these apparent advantages of a more thorough examination of the question can be illusory if the judge actually lacks sufficient basic technical training to enable him prop-

erly to grasp the significance of evidence on these points, which is adduced before him.<sup>(3)</sup> Unhappily, this is precisely what happens all too often. The remedy is obvious.

Technically trained judges will not insure a perfect agreement of decision, nor a perfectly operating patent system. There are differences of opinion even as between the examiners, although not so great as current differences between the Patent Office and the Courts. Technically trained judges would continue to disagree with each other and with the Patent Office, but less than at present. Moreover, and this is important, adequate technical training cannot help but make for sympathetic consideration by the judge of the technical aspects of patent cases, something notably lacking in many recent decisions.

For a hundred and ten years (1836-1946) the Patent Office has continued to grant patents, some of which the

(3). Judge Learned Hand said in *Park-Davis v. Mifflin*, 189 Fed. p. 95, at p. 115 (on the patents on Adrenalin):—

"I cannot stop without calling attention to the extraordinary condition of the law which makes it possible for a man without any knowledge of even the rudiments of chemistry to pass upon such questions as these. The inordinate expense of time is the least of the resulting evils, for only a trained chemist is really capable of passing upon such facts, e.g., in this case the chemical character of Von Furth's so-called 'zinc compound,' or the presence of inactive organic substances. In Germany, where the national spirit eagerly seeks for all the assistance it can get from the whole range of human knowledge, they do quite differently. The court summons technical judges to whom technical questions are submitted and who can intelligently pass upon the issues without blindly groping among testimony upon matters wholly out of their ken. How long we shall continue to blunder along without the aid of unpartisan and authoritative scientific assistance in the administration of justice, no one knows; but all fair persons not conventionalized by provincial legal habits of mind ought, I should think, unite to effect some such advance."

Courts have failed to sustain. That is a normal result of the difference in function, difference in knowledge of the facts, and difference in technical knowledge of the arts involved. One can understand the difference in end results and can also see that the chief improvement in organization must come from an improvement in the technical qualifications of the Courts. This is particularly the case because of the increasing complexity and diversity of modern technology.

The agitation calling for the Patent Office to elevate its standard of invention appears to the author not to be free of political motives.

The administration in power is chargeable with appointment of men to the Federal Courts who have been more imbued with a zeal to promote social and political doctrines than endowed with judicial temperament. That this is true of even the Supreme Court cannot be denied. When the judge is more interested in seeing that certain social and political ends shall prevail than that the case be decided according to the law of the land, it is not difficult to understand why the Court demands a "flash of genius" as a basis for the patent, instead of a new and useful invention or discovery as called for by the Statutes. It is not for the Court to inquire into the policy of granting patents. That policy was announced by the Constitution and adopted by Congress in passing the Patent Statutes. Let the Courts

stick to their judicial duties, and let Congress, if it will, change the law.

### Conclusion

Better administration of existing laws will improve the operation of the Patent System. This is true both in the Patent Office and in the Courts. Invention is that which is recognized as such by the art in which it is made. That is the one and only infallible standard.

Technical or scientific qualification of the Courts passing upon patents will reduce the difference in so-called standards of invention, and will reduce the nuisance value of improvidently issued patents.

Abandonment of political and social considerations and adherence to the law will improve the decisions of Courts in patent cases.

J. T. Baker Chemical Company, Phillipsburg, New Jersey, is erecting another manufacturing unit for organic chemicals.



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# Certification of Chemists

**Dr. Samuel M. Gordon, F.A.I.C.**

*Vice President, Endo Products, Inc., Richmond Hill, N. Y.*

The licensing or certification of chemists by appropriate legal bodies has many proponents. It also has many opponents. Both sides present what to them are good arguments for their point of view. Those who have not followed the debate intimately or those who have not made a detailed study of licensure in other fields often are confused. The confusion arises, the writer believes, because the arguments pro and con have been kept on too general a plane. The proponents of licensing hold that the work of all chemists is intimately related with daily living, therefore, they contend the state owes the protection to the public by providing machinery to separate qualified from unqualified chemists. The opponents of licensure claim that the work of the chemist is directly related to the well-being of the public only in a general sense. In such a situation much can be gained by getting down to cases.

Professor Victor C. Myers, of Western Reserve University, who has a great background of experience in teaching clinical biochemistry to medical students and graduate chemists, has attempted to do this. At the Atlantic City meeting of the Ameri-

can Chemical Society, Dr. Myers presented some arguments for certification of biochemists whose daily work is without doubt directly related to the treatment of disease. To one who has followed both sides of the question sympathetically, but with a leaning toward certification of chemists in many fields, it is difficult to see how one could object to the well-reasoned conclusions of Dr. Myers. The abstract of Dr. Myers' remarks is so pointed and pertinent to the whole discussion that they are reproduced in full from the abstract of the meetings at Atlantic City.

Owing to the tremendous progress which has occurred in the application of chemical methods of the diagnosis, prognosis, and treatment of disease during the past thirty-five years, no hospital, clinic, or clinical laboratory is complete today without at least a moderately well equipped chemical laboratory. The individuals who pioneered these important chemical developments were able to do so because they had sound fundamental chemical training. If this work is to continue to progress on the same high plane it must be in the hands of individuals who have had suit-

able chemical training and plan to make this their profession. It is not surprising that few medical graduates have entered this field, since their training seldom includes the requisite chemical background, and so many opportunities are open to them.

It is reasonable that if this work is to be properly carried out, the chemists in charge should receive recognition and remuneration commensurate with the importance of their work. Since this work is fundamentally chemical in nature, the American Chemical Society owes it to the public to see that the chemical divisions of hospital and clinical laboratories are in charge of individuals who have received adequate chemical training to qualify (and be certified) as clinical biochemists and that such individuals are given the recognition that belongs to members of the chemical profession.

Chemists who have had experience with lawyers, public accountants and other professions similarly placed in relation to the whole problem may help further clarify the matter by bringing the discussion down to cases. In any event, until the problem is finally settled one way or the other, the efforts of the American Chemical Society in accrediting schools with chemical courses and the efforts of such bodies as THE AMERICAN INSTITUTE OF CHEMISTS can do much to

draw the lines to make the final position clearer. In this respect, the efforts of the chemists of Ohio to secure licensing of chemists within that state will serve as an excellent laboratory trial for further efforts in that general direction.

### Calco Creates New Research Position

Calco Chemical Division of American Cyanamid Company, Bound Brook, N. J. is continuing its program to give greater recognition to research personnel, by establishing the position of "research fellow". This position enables qualified research personnel to concentrate on research without the handicap of supervisory responsibilities. Eligible for the position are employees with ten years of professional experience after the Ph.D. degree, (or fifteen years of professional experience after the B.S. degree) plus five years of continuous service in research with the company.

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## Annual Reports

### National Legislation Affecting the Chemist Annual Report 1945-46

Two very important matters of deep concern to the chemists of this country currently are being considered by Congress. One concerns legislation dealing with the control

of atomic energy at the national level, and the second a series of bills dealing with the creation of a national science foundation.

Since last August 6th, the most vital problems confronting all of the peoples of the world have revolved around the fact that a power of a

new order of magnitude has been released with the harnessing of atomic energy. We have come face to face with the task of controlling this new force from both the national and international standpoints. It is only too evident that the international implications are so grave, that the statement of the world will either solve them and thereby make possible a better life than has ever been known before, or if they fail, it is likely that sooner or later civilization will be destroyed. During the past several months a number of bills have been introduced in the House of Representatives and in the Senate concerning the control of atomic energy. Hundreds of scientists, statesmen, politicians, clergymen, military officials, and others have testified before Congressional Committees.

On November 1, 1945, the May-Johnson Bills, HR-4566 and S-1463 were introduced in House and Senate. It is generally felt that the May-Johnson Bill had the full support of the military authorities. Immediately a tremendous amount of opposition developed against the bill, principally by the scientists of this country who felt, and rightfully so, that the measure would restrict arbitrarily and unnecessarily the freedom of scientists to work and publish in the field of nucleonics. Opposition was so strong that a new Senatorial Committee was created, known as the Special Senate Committee on Atomic

Energy, and headed by Senator Brien McMahon of Connecticut. After hearings lasting for several weeks, Senator McMahon introduced what is generally termed the McMahon Bill. This proposal received the enthusiastic endorsement of most scientists and was so written that control of atomic energy was to be placed in the hands of a civilian commission. Rather unexpectedly the Senate Committee on Atomic Energy, more commonly known as the McMahon Committee, introduced a number of amendments which are highly displeasing to scientists and others who fear that the military seek autocratic control in this country. At the moment there is a terrific controversy raging over the so-called Vandenberg amendment to the McMahon Bill.

Briefly the Vandenberg amendment provides for a liaison committee or board of the military with power to appeal to the President any and all decisions of the Civilian Commission, provided for in the Bill. Proponents of the Vandenberg amendment insist that the amendment does not give to the military over-riding power, while the opponents of the amendment insist that the wording is such that the military is given autocratic and dictatorial powers which should not be granted in a democracy. The whole question has been confused further because of alleged spy scares and the present

controversy with Soviet Russia on important matters of international policy.

It is the generally accepted opinion of American chemists and chemical engineers that the wording of atomic energy legislation should be clear-cut and unequivocal as to where top authority rests in decisions concerning atomic energy. Authority should rest with a Civilian Commission, yet with adequate provision for liaison with the military until such time as it is possible to turn over international control to UNO.

Since the framing of proper legislation control on atomic energy is of prime importance to the chemical profession, it should be a subject for earnest discussion and consideration by the members of the INSTITUTE. A formal resolution should be adopted outlining in detail the position of the INSTITUTE and such a resolution should be forwarded to the proper Committees in Washington now concerned with the problem of framing legislation at the national level.

#### *National Science Mobilization*

The publication of the Vannevar Bush report entitled, "Science—the Endless Frontier" emphasized the problem of Federal support for science in the postwar years. The report was written in response to a request made by the late President Roosevelt in November 1944 and was based on individual studies of the release of science to the public

welfare, the problems of medical research, the development of scientific talent, and the publication of scientific information.

Early in 1945, Senator Magnuson of Washington introduced a bill to implement Dr. Bush's recommendations. Shortly thereafter a Senate Subcommittee introduced a bill to establish a national science foundation, expressing ideas of a national scientific policy as viewed by Senators Kilgore, Johnson, and Pepper. The measure very quickly became known as the Kilgore Bill.

In an effort to reconcile differences existing between the so-called Magnuson and Kilgore Bills, it was decided to hold joint hearings of the Subcommittees of the Senate Committee on Commerce and the Senate Committee on Military Affairs. An imposing list of scientific and non-scientific celebrities presented their views. To the overwhelming majority of scientists the Magnuson Bill S-1285 was the most desirable one of the several under consideration. The original Kilgore Bill S-2197 was highly undesirable. The fundamental philosophies contained in these two measures were as wide apart as the north and south poles. The Magnuson Bill would vest the powers of the foundation in a board selected by the President on the basis of their demonstrated capacity for the work of the foundation without regard to political affiliations. Under the Kil-

gore Bill the powers of the foundation would be vested in a single director with an advisory board largely composed of Government officials. The Kilgore Bill was feared because it was a poorly disguised attempt to regiment scientists and to exercise autocratic control of science and industry.

In both bills provisions were made for revamping the patent law. In the opinion of the vast majority of chemists the patent problem should be omitted from any bill dealing with national mobilization and should be treated in separate legislation and only after a national science foundation has been in operation for a reasonable period of time.

Considerable opposition developed on the part of physical scientists to the inclusion of "social science" in the bill, scientists believing that matters concerning the social sciences should be dealt with in separate legislation.

A number of revised bills have been subsequently prepared in an attempt to reconcile opposing viewpoints. On December 21, 1945, S-1720 was introduced by Senators Kilgore, Johnson, Pepper, Fulbright, and Saltonstall. While S-1720 was a distinct improvement over the original Kilgore Bill S-2197, it contained a number of very objectionable provisions. On February 21, 1946 still another Bill, S-1850, known as the Revised Kilgore-Magnuson Bill,

was introduced in the Senate by Senators Magnuson, Kilgore, Johnson, Pepper, Fulbright, Saltonstall, Thomas, and Ferguson. On March 19th the Senate Military Affairs Committee approved S-1850 by a vote of six to two.

On January 30, 1946, the so-called Willis Bill, S-1777 was introduced in the Senate by Senators Willis, Hart, Hawkes, Hickenlooper, Smith, Stanfill, Wiley, and Young and referred to the Committee on Commerce. The Senate Commerce Committee as of March 28, 1946, has not acted on either the Revised Kilgore-Magnuson Bill, S-1850, or the Willis Bill S-1777.

The situation has now taken on a decided political flavor in that the Revised Kilgore-Magnuson Bill appears to have the backing of certain influential Democratic members of the Senate, while the Willis Bill appears to have the blessing of a number of important Republican Senators.

S-1850 is certainly a decided improvement over the original Kilgore Bill and the so-called Revised Kilgore Bill.

It would appear to be highly desirable, because the future welfare of the chemist is at stake, that the Council of the INSTITUTE discuss in detail the provisions of both the Magnuson-Kilgore Bill S-1850 and the Willis Bill S-1777, particularly the former. If any legislation is passed

## ANNUAL REPORTS

during the present session, it is very likely to be the compromise measure S-1850. It is generally felt in Washington that S-1777 has little or no chance—at least under the present political complexion of the Senate. For many practical reasons, it is highly desirable for the INSTITUTE to take formal action on the Magnuson-Kilgore Bill S-1850, approving it in its entirety, or pointing out those portions which are still objectionable, in the hope that improvements can be made in the Bill when it reaches the floor of the Senate. It should also consider the Willis Bill and finally decide if no legislation at all is to be preferred to the measures now under consideration, namely S-1850 and S-1777.

### *Civil Service*

Attention is called to Section V of the Veteran's Preference Act of 1944 which contains the following statement:

"No minimum educational requirements will be prescribed in any civil service examination except for such scientific, technical, or professional positions the duties of which the Civil Service Commission decides cannot be performed by a person who does not have such education. The Commission shall make a part of its public records its reasons for such decision."

A number of scientific societies immediately protested against the ac-

tion of the Civil Service commission in requiring minimum educational qualifications in the case of medical doctors, dentists, veterinarians, teachers, nurses, and some other classifications which very obviously fall within the category of scientific, technical, and professional positions, while failing to demand minimum educational requirements from those seeking positions as chemists, physicists, and engineers.

The committee is pleased to report that the Civil Service commission has now proposed a policy which it believes to be within the law and which will go a long way towards satisfying the apprehension of a large number of scientific societies who express concern about the problem in a formal communication to the commission and to the Civil Service Committees in Congress.

The new policy can be summarized briefly by stating that minimum requirements for entrance to examinations for the lowest professional grades (P-1 and P-2) will be established in accord with one of the following four criteria:

1. For the general professional examination in the whole field of Federal Service, scientific and otherwise, a full four-year college course in an approved institution must have been completed or the candidate must have four years of appropriate equivalent experience,

or an equal and appropriate combination of college work and experience.

2. In all scientific or professional positions where the duties involve research or advanced technical work, only graduates of approved institutions holding the appropriate degree will be certified.
3. When state laws require certification for the work involved, levels of training required for certification will govern.
4. For certain types of examinations completion of an approved college course will be required, or a minimum of a fixed number of semester hours of credit in specified courses will be required, plus appropriate experience equivalent to finishing a college course.

Unquestionably the second of the four possibilities is the one that will govern in most scientific activities. There is, of course, the question—what constitutes research? This question has been referred to the Advisory Committee on Scientific Personnel and it has been requested to prepare a formal recommendation embodying criteria to be applied in the determination of what scientific activities are to be included in the research categories.

Respectfully submitted,  
WALTER J. MURPHY,  
*Chairman.*

### Unemployment Annual Report 1945-46

Because of the very great shortage of chemists, no acute unemployment condition has existed and therefore your Committee has not organized a formal program. However, it is recognized that this situation is now changing and it is believed that your Committee could organize a program to render a service not now covered by any other organization.

Some informal discussions have been held and some ideas exchanged through correspondence within the Committee. In Mr. Breyer's letter to the writer of November 10th, the following important statement is made—

"Although the emphasis is entirely different from what it was in the years following 1929, the problem of helping chemists to locate properly is basically the same. It involves just two factors: (1) a thorough study and knowledge of the markets for chemical services; and (2) personal service to the chemist so that he can sell his services in these markets to the best advantage."

Mr. Breyer further calls attention to the desirability of avoiding the error of looking out for

"only the highest qualified and least confused men, leaving the less qualified and bewildered to look out for themselves. On the basis of need, the less qualified and so-

## ANNUAL REPORTS

cially astute are certainly more in need of help and guidance than anyone else, and from the standpoint of building up and maintaining the morale of the profession and improving the services of the INSTITUTE, we should keep in mind that "the service is greatest where the need is most".

The first thing to be determined in the opinion of your Committee is whether the INSTITUTE can underwrite the market survey, referred to by Mr. Breyer, and which is vital to further activities. This survey could, it is suggested, be made in the following way:

1. Request the cooperation of each chapter to the extent of appointing one young and capable worker as a member of the Unemployment Committee to be charged with preparing a list of possible employers in the area covered geographically by the chapter;
2. Canvas this market preferably by means of correspondence from the central office in regard to their needs for chemists;
3. Prepare a summary catalogue of this information in the central office of the INSTITUTE, preferably with copies for each chapter office.

It is respectfully recommended that this matter be brought before the National Council for action relative to an appropriation for the support of this work.

—E. R. ALLEN, *Chairman*.

### Economic Welfare Annual Report 1945-46

Early in the year the Department of Public Health of The Commonwealth of Massachusetts proposed a revision of classification of their chemical and engineering employees. Acting through a subcommittee headed by Dr. Gustavus J. Esselen, the INSTITUTE was represented and supported the group of chemists.

A similar situation arose in the City of New York. The INSTITUTE was represented by a subcommittee headed by Dr. W. D. Turner. That matter is still in abeyance.

The committee has cooperated closely with other committees, such as that on Employer-Employee Relationships and that on Contracts.

—FOSTER DEE SNELL, *Chairman*.

### Contracts Annual Report 1945-46

The committee on employment contracts was increased by two members during the year to include Mr. Harold Vagenius, patent attorney, and Mr. Clifford Hampel, research chemist, bringing the membership to five. Several meetings were held and a final report was prepared, which was submitted to the President on October 15, 1945, with the request that the committee be discharged. Before submitting its final report the committee submitted a preliminary draft to a number of Fellows of the Institute and to some others interested

in the subject, for their comments and suggestions.

VANDERVEER VOORHEES,  
*Chairman.*

### Ethics

#### Annual Report 1945-46

Your Committee on Ethics has held itself in readiness throughout the past year to consider such matters as might properly be brought before it for study and recommendation.

One such case, that of one of our members whose application for membership appears to be irregular, is now before us and a report on this case will be forthcoming.

It is our pleasure to report that only this single case has required our attention and our calendar is otherwise clear.

Respectfully submitted,  
A. W. BURWELL  
RAYMOND E. KIRK  
H. R. KRAYBILL  
W. D. TURNER,  
*Chairman.*

### Qualifications

#### Annual Report 1945-46

The Qualifications Committee has examined all of the applications for membership received during the 1945-1946 year of the INSTITUTE and has reported its findings to the National Council for action.

Respectfully submitted,  
HOWARD S. NEIMAN,  
*Chairman.*

### Chemical Condensates

Ed. F. Degering, F. A. I. C.

The panorama of fall woodland colors results, reports Dr. Verne O. Graham of the Chicago Academy of Science, from the transfer of carbohydrate, chlorophyll, sugar, tannin, and other vital substances to the trunk and roots of plants for winter storage.

"About 100 years ago the U. S. patent commissioner opined, from behind his roll top desk and a huge cigar, that he'd soon have to shut up shop. He reasoned that about all the things worth patenting were already in the books; that the well of human resourcefulness and initiative had about run dry. But the honorable commissioner reckoned without knowledge of scientific research."

If chemists are most effectively to make their own essential and indispensable contribution to the solution of the many urgent problems of reconstruction and postwar prosperity they must, without any thought of domination on their part, or of claiming to force decisions in matters which lie outside their special province, be admitted to a full and free collaboration with those who have the responsibility of framing policy and administering the affairs of the country.

—ALEXANDER FINDLAY,  
M.A., D.Sc., *Royal  
Institute of Chemistry.*

## CHAPTERS

### Baltimore

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3816 Greenmount Ave.,

Baltimore 18, Md.

*Council Representative, Maurice Siegel*

*Alternate, J. F. Muller*

*News Reporter to THE CHEMIST, Ralph Lamenzo*

At a meeting held recently at Loyola College, Mr. John P. Allen of the Standard Oil Company (New Jersey) spoke on petroleum processes.

The various types of crude processed at the Baltimore Refinery of the Standard Oil Company of New Jersey are (1) East Texas Crude, a sweet mixed base, high wax content; (2) Light Rufugio Crude, a sweet naphthenic base; (3) Lagunillas crude, a sweet asphaltic base, high in sulphur and asphalt content.

Mr. Allen described the development of crude distillation equipment through various steps from the original single batch still operation to the use of multiple continuous shell still batteries, thence to the present new high capacity pipe stills.

By crude distillation alone, a yield of approximately twenty per cent gasoline was originally obtained from a given type of crude. However, with the advent of the "cracking process", which was the subjection of high boiling fractions of crude oil to high temperatures (1000°F.) and pressures (1000 PSIG), it was possible at these conditions to "crack" or "break

down" the heavier molecules into lighter and more volatile molecules of gasoline. This process known as "thermal cracking" resulted in an increase in yield of gasoline to approximately forty-five per cent gasoline on crude.

It has been realized for some time that when cracking was carried on in the presence of certain catalysts the amount of gasoline produced was increased, and moreover, the anti-knock qualities of the gasoline were greatly improved as a result of intensive research and development.

A new process, involving the use of a catalyst, known as the Fluid Catalytic Cracking Process was perfected by the Standard Oil Development Company, a research and development affiliate of the Standard Oil Company (New Jersey.) Its basic technique is the handling of a fluidized solid in much the same manner as an ordinary liquid would be handled. Fluidizing is accomplished by means of proper aeration with air, steam, or hydrocarbon vapors.

The catalytic cracking unit consists of a reactor where the cracking

reaction takes place, a regenerator which is required to burn the carbon produced and deposited on the catalyst in the cracking reaction and conventional fractionating equipment where the cracked vapors are condensed and separated into gasoline and heavier components.

In actual operation the reactor and regenerator are connected in such a manner that flow between the two vessels is continuous and does not require the use of pumps or other mechanical devices but instead depends upon the "fluid head" developed. Careful control of pressure and density in the vessels and connecting piping is necessary to insure satisfactory flow.

In this plant, hot catalyst flows from the bottom of the regenerator into the regenerated catalyst standpipe where it builds up pressure due to the static head of the relatively dense fluid catalyst. The rate of flow of the hot catalyst is controlled to maintain constant the reactor temperature and is mixed with the incoming preheated feed through an injector. The oil is vaporized and super heated by the hot catalyst which is then carried to the reactor by the vapors. In the reactor, the major portion of catalyst settles out into a dense bed, and only a fractional per cent of the catalyst circulated is carried out of the reactor by the vapors. Practically all of the catalyst

carried overhead is returned to the system by means of recovery equipment. The spent catalyst flows down through an annular space at the bottom of the reactor, where steam strips out entrained oil vapors. The catalyst flowing from the reactor is picked up by air in another injector and carried to the regenerator. Here the catalyst again settles out in a dense bed, and only a small fraction is carried out of the vessel to catalyst-recovery equipment. The coke formed during the cracking reaction is burned off in the regenerator, and the catalyst, after regeneration, flows into the regenerated-catalyst standpipe, thus completing the cycle.

The materials produced in the catalytic cracking unit are, a light hydrocarbon stream, rich in isobutane and butylene components, which may be utilized as a feed stock for Alkylation, or Polymerization units, a motor gasoline base stock of high octane quality and a heating oil of the type used in domestic furnaces.

Although the fluid technique was developed for the purpose of manufacturing superior gasoline fuels, it would be a mistake to regard this development as just another petroleum process. The new and revolutionary application of engineering principles which it employs are likely to find wide-spread application in the chemical industry.

## CHAPTERS

### Chicago

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*Vice-chairman*, F. B. Burns

*Secretary-treasurer*, Mary L. Alexander

2970 N. Sheridan Street

Chicago, Ill.

*Council Representative*, Martin de Simo

#### Annual Report 1945-46

The Chicago Chapter held four open meetings during the year on the following subjects:

Oct. 25, 1945: Honorary Scroll Award and Testimonial Dinner to Dr. Donald B. Keyes. Speakers: Dr. G. Egloff, Dr. A. L. Elder, and Dr. Lawrence Brown.

Nov. 30, 1945: "Research, Industry, and Government." Address by Dr. Bruce K. Brown.

Feb. 8, 1946: "Some Fundamental Requirements for Licensing a Profession." Address by Dr. E. L. Luaces, followed by discussion panel comprising Messrs. H. A. Cranston, R. W. Favis, H. I. Jones and A. I. Kegan.

Mar. 29, 1946: "What's Wrong with Our Chemical Societies?" Address by Dr. Otto Eisenschiml, followed by discussion panel comprising Messrs. M. H. Arveson (Chicago Section, American Chemical Society), M. Dole (Science Division, Independent Citizens' Committee), L. J. Hayhurst (Chemical Arts Forum), T. Kohman (Atomic Scientists of Chicago), and H. McCormack (Chicago Section, American Institute of Chemical Engineers).

These meetings were well attended, and indicated that the discussion

panel type of program is an effective method of presenting controversial subjects.

In addition to these programs, the Chapter Program Committee arranged, in co-operation with representatives of the American Association for the Advancement of Science, the American Chemical Society (Chicago Section), and the Chicago Chemists Club, a jointly sponsored mass-meeting of scientists held Nov. 8, 1945, at Thorne Hall, on the subject, "Research, Government, and You." The speakers at this meeting, which concerned national legislation affecting scientists, were Messrs. A. J. Carlson, J. Dienner, R. K. Summerbell, H. I. Schlesinger, B. K. Brown, and R. W. Gerard.

A fifth meeting will be held on May 31st, which will be a closed meeting devoted to a business session.

The Committee on Student Awards awarded medals to the following:

Robert L. Wear, University of Illinois

Bernard Iwanciov, University of Wisconsin

Gorman L. Quinn, Illinois Institute of Technology

Miss Themis Askounis, Northwest-  
ern University

Milton Charles Lauenstein, Purdue  
University

George Van Dyke Tiers, University  
of Chicago

Paul Newton Taggett, University of  
Notre Dame

The Chicago Chapter of the Amer-  
ican Institute of Chemists sponsored  
a panel discussion entitled "Produc-  
tion of New Chemicals" at the Chi-  
cago Production Show and Confer-

ence, March 22, 1946. The program  
was as follows:

Chairman: Dr. C. L. Thomas,  
Great Lakes Carbon Corporation,  
"From Laboratory to Production",  
Dr. Johan Bjorksten, Bjorksten La-  
boratories; "The Silicones", R. D.  
Kolderman, Dow-Corning Corpora-  
tion; "Fatty Acids and Their De-  
rivatives", H. M. Corley, Armour  
and Company.

H. R. KRAYBILL,  
*Chairman.*

### Miami Valley

*Chairman*, E. W. Fasig

*Secretary-treasurer*, John R. Fisher, Jr.  
Chemical Developments Corp.

1771 Springfield Street, Dayton 3, Ohio

*Council Representative*, E. L. Luaces

*Vice-chairman*, G. F. Garnatz

The Chapter held the following  
meetings during the year, with the  
speakers indicated:

Sept. 20, 1945, Dr. George F.  
Deeble, "The Chemist in This  
Changing World".

Nov. 23, 1945, Mr. G. M. Jure-  
dine, "Professional Ethics".

Dec. 13, 1945, Mr. M. H. Arve-  
son, "Research, Industry and Gov-  
ernment".

Jan. 30, 1946, Mr. Walter Graf,  
"The Engineers Registration Act as

a Model for The Licensing of  
Chemists".

Feb. 21, 1946, Dr. Vanderveer  
Voorhees, "Employment Contracts  
for Chemists".

Mar. 30, 1946, Annual Chapter  
Award of Merit to Dr. Martin H.  
Fischer.

In addition to the above, the mem-  
bers have been actively engaged in  
the Ohio Chemists' Registration Act.

—JOHN R. FISHER, JR.,  
*Secretary-Treasurer.*

### New Jersey

*Chairman*, G. L. Royer

*Secretary*, Harry Burrell  
Burrell and Neidig

115 Broadway, New York 6, N. Y.

*Treasurer*, John B. Rust

*Vice-chairman*, Paul Allen, Jr.

*Council Representative*, H. E. Riley

**Annual Report 1945-46**

A representative group of Fellows met October 23, 1945, at Newark and adopted a petition to the Council of THE AMERICAN INSTITUTE OF CHEMISTS for the formation of a New Jersey Chapter; adopted a constitution and by-laws and elected the first officers. This petition was formally approved at the January, 1946, meeting of the National Council. The Chapter, at the beginning, had a membership of some 250 fellows and some 15 more have been added since.

Dr. E. H. Northey was the first Chairman, but because of his almost immediate removal from the area to Connecticut, I was chosen to take his place. The first officers were, Chairman, H. E. Riley; Vice Chairman, Paul Allen, Jr.; Secretary, Harry Burrell; Treasurer, J. B. Rust; Councilors, E. R. Allen, P. M. Giesy, William J. Sparks, R. W. Charlton, and L. T. Work; Chapter Representative, H. E. Riley.

In February steps were taken to open a checking account, the fiscal and official Chapter year was set at June 1st to May 31st, and the annual meeting was set for May, with the first such meeting to occur May 6th. Chairmen of nominating, membership, house, and program committees were appointed. It was also decided to take steps to incorporate the Chapter as a non-profit organization under the laws of New Jersey.

On May 6th, the report of the Nominating Committee was accepted and the officers listed above took office, in addition to the following Councilors: W. J. Sparks, R. W. Charlton, J. L. Brannon, Victor Chalupski, and G. P. Whitcomb.

The final action in the preparation of incorporation papers was also taken. I can now report that the charter of incorporation has been received, and that the new chairmen and officers are laying plans for a very active year.

H. E. RILEY,  
*Chairman.*

**New York**

*Chairman,* John J. Miskel

*Vice-chairman,* Hugh B. Hodge, Jr.

*Secretary-treasurer,* R. L. Bateman

Fine Chemical Division, Carbide & Carbon Chemicals Corp.

30 East 42nd St., New York 17, N. Y.

*Council Representative,* L. H. Flett

**Annual Report 1945-46**

The New York Chapter has continued the policy of conducting meetings of general rather than specialized interest. At each meeting two speak-

ers were presented, and five meetings were held.

The first meeting featured the presentation of Mr. Arthur Schroder, executive director of THE AMERICAN

INSTITUTE OF CHEMISTS, who was formally introduced to the New York Chapter and addressed the meeting on "The Aims of the Institute". Following this Dr. H. deWolfe Smyth discussed "Atomic Power", in what we believe was the first public discussion of the recent discoveries in the field of atomic energy by an authoritative speaker. The meeting was attended by 450 members and guests and some 300 more could not be admitted for lack of even standing room.

At the meeting of November 29th, a certificate of Honorary Membership in THE AMERICAN INSTITUTE OF CHEMISTS was presented to Dr. Marston T. Bogert, who discussed "The International Union of Chemistry and One World". Mr. Walter J. Murphy, Editor of *Industrial and Engineering Chemistry*, presented a paper on the subject "Will American Chemists Get the German Chemical Information?"

The meeting of January 24th was attended by about 200 members and guests who heard addresses by Dr. Earl L. Whitford of the Oldbury Electro-Chemical Company, on "Phosphorus—Some of its Compounds of Industrial Significance", and Dr. W. E. Kuhn of The Texas Co., on "Lubrication, Modern Trends".

The meeting of March 22nd featured the presentation of the INSTITUTE student medals to eight students

for outstanding scholastic records and qualities of leadership. The recipients were:

Miss Florence Goldberg, Brooklyn College

Mr. Stanley Tannenbaum, College of the City of New York

Mr. Serge N. Timasheff, Fordham University

Mr. Richard J. Kandel, New York University, Washington Heights

Miss Corinne Judson, New York University, College of Arts and Science

Mr. David Edelson, Polytechnic Institute of Brooklyn

Miss Carol Herrmann, Queens College

Mr. Morton Milbert, Rutgers University

Dr. John N. Street, assistant director of laboratories, The Firestone Tire and Rubber Company, talked on the subject "Synthetic Rubber—What Now?" and Dr. Lorin B. Sebrell, director of research, The Goodyear Tire and Rubber Company, discussed "Plastics, as Materials of Construction" and presented an interesting exhibit of plastic materials which have been developed through research in the laboratories of the rubber industry. About 200 members and guests were present, including many members of research staffs in the rubber industry.

The Annual Meeting was held on May 3rd at which time the officers shown above for 1946-1947 were

## CHAPTERS

ected. In addition, Dr. W. H. Gardner, Dr. Harvey A. Seil and Dr. Byron Thompson were elected councilors for three years; Dr. Martin Meyer and Mr. Harry Bennett, councilors for one year. Following the business meeting, the use of motion pictures in the selling of chemicals was discussed by Mr. Milton F. Marton, vice president of Transfilm, Inc. and Mr. Walter S. Colvin, sales manager, Barrett Division, Allied Chemical and Dye Corporation. Several recent industrial films were shown.

That the New York Chapter has aroused an unusual degree of interest in its activities, is shown by the greatly increased attendance at meetings. The average attendance at all meetings was approximately 240 which is by far the greatest for any year. A number of factors contributed to this. A special effort was made to create an atmosphere of friendliness at the meetings. It was recognized that the chemists' professional interests are personal and can be advanced by personal contact with other chemists. All the members of the council, the officers of the section and the various committees cooperated heartily in the creation of an atmosphere of friendliness at all the meetings. About thirty-five other Technical Societies in the Metropolitan Area were contacted through their officers with advance notices of the meetings.

During the year sixty-nine applica-

tions for membership were received in the New York Area. Particular attention was directed toward interesting younger chemists in the professional aspects of their life-work.

The chemist's personal interest can be best realized and his proper recognition by society attained only through cooperation with other chemists. This cooperation must rest on mutual confidence and be developed from personal contacts. Chemists, in short, must learn to work with "people" as well as with materials. The Slogan of the New York Chapter, "The Institute of Chemists is a friendly organization", was made very real through the conscious and enthusiastic effort of the Chapter officers, committee chairman, and members. The members of the council gave freely of their time to attend meetings for planning the year's activities and discussing professional problems, and to make the meetings much more than gatherings to hear technical or professional subjects discussed. To each of them belongs the credit for a year successfully completed and the right to look forward to a continuation of growth and enthusiasm. Chemistry can attain full recognition as a "Profession", but only through conscious effort to this end.

Respectfully submitted,  
A. LLOYD TAYLOR,  
*Chairman.*

## Niagara

*Chairman*, F. L. R. Sievenpiper

*Vice-chairman*, Wallace M. Hazel

*Secretary-treasurer*, Oliver M. Morgan

64 Northledge Drive

Snyder 21, N. Y.

*Chapter Representative*, James Ogilvie

### Annual Report 1945-46

There have been four meetings, with an average attendance of twenty to twenty-five representing a membership of about sixty.

October 2, 1945: Subject, "The Licensing of Chemists" by Arthur Schroder. This controversial subject provided a wholesome if at times somewhat hectic meeting.

December 2, 1945: Subject, "Some Post-War Problems in Research" by Lawrence H. Flett. His talk was very interesting and very well received.

February 21, 1946: Joint meeting with societies belonging to the Buffalo Engineering Council: Subject, "Light for Tomorrow" by Samuel G. Hibben, Consulting Engineer of Westinghouse Electric Corporation. This meeting was an especially interesting one and had an attendance of approximately 1,000.

April 2, 1946: Subject, "Research, Industry and Government" by M. H. Arveson, Senior Technologist of Standard Oil Company of Indiana. While our attendance was small, good newspaper publicity permitted a larger audience to be reached by an especially clear

summary of proposed legislation.

Final meeting will be June 2, 1946, with Lester Hoyt, F.A.I.C., our speaker, who will talk on his experiences in Germany where he went as a "simulated Colonel" for one of the government agencies.

### Buffalo Engineering Council

We joined the Buffalo Engineering Council, comprising some fourteen technical societies. We have two active delegates to the council meetings, Messrs. Ogilvie and Sievenpiper, who are making their influence felt far out of proportion to the size of membership they represent.

### New Members

We have campaigned rather persistently for new members and on the balance have gained four or five more than we have lost. We have been fortunate in the very high caliber of some of the new members.

R. G. BROWN,

*Chairman.*

### Correction

The address of John M. Weiss, F.A.I.C., author of "A Chemical Engineer Speaks", which appeared in the July issue of THE CHEMIST, page 271, should have been: 52 East 41st Street, New York 17, N. Y.



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### Pennsylvania

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Vice-chairman, Harold Tucker

Secretary-treasurer, Kenneth E. Shull

Philadelphia Suburban Water Company

762 Lancaster Avenue, Bryn Mawr, Penna.

Council Representative, John M. McIlvain

News Reporter to THE CHEMIST, John H. Staub

#### Annual Report 1945-46

Up to and including April, the Pennsylvania Chapter has held six technical and professional meetings. All of these were held at the Engineers' Club, and were preceded by an informal dinner.

A list of the meetings, speakers, and topics follows:

October 2, 1945—"What the Institute Does for the Chemist", Mr. Arthur Schroder, executive director, THE AMERICAN INSTITUTE OF CHEMISTS.

November 6, 1945—"Protective Organic Coatings", Dr. Joseph Mattiello, technical director, Hilo Varnish Corporation, Brooklyn, N. Y.

December 4, 1945—"Powder Metallurgy", Dr. Walter Baeza, Consultant, Industrial Research Company, New York, N. Y.

February 5, 1946—"The Atomic Bomb and the Future of Atomic Energy", Dr. Roy K. Marshall, assistant director of the Franklin Institute, and science editor of the *Philadelphia Evening Bulletin*.

March 5, 1946—"The Petroleum Situation in Germany Before, During, and After the Second World War", Dr. Horace M. Weir, consulting chemical engineer.

April 2, 1946—"The Chemist as Demobilized from the Armed Forces", Mr. Walter J. Murphy, Editor, *Industrial and Engineering Chemistry*.

The usual May plant trip will be held on the twenty-fourth, and will consist of a visit to the U. S. De-

partment of Agriculture's Eastern Regional Research Laboratory at Wyndmoor.

Abstracts of all talks delivered before the Pennsylvania Chapter have been or will be published in *THE CHEMIST*.

The Executive Committee met three times during the year. Officers for 1946-1947 are shown above.

Respectfully submitted,  
HAROLD A. HEILIGMAN,  
*Chairman.*

## Washington

*President*, Eduard Farber

*Vice-president*, William L. Hill

*Secretary-treasurer*, Royal E. Rostenbach

319 North Quincy Street, Apt. 1

Arlington, Virginia

*Council Representative*, Walter J. Murphy

*Reporter to THE CHEMIST*, H. I. Feinstein

### Annual Report 1945-46

The Washington Chapter has successfully concluded an active year devoted in the main to objectives of the *INSTITUTE*. We have had four meetings, each with a principal speaker. A final meeting remains, at which officers for the ensuing year will be elected.

The first meeting brought to us the *INSTITUTE*'s executive director, Mr. Arthur Schroder. His address stimulated interest in the programs outlined for the year. His coming also set up a warm feeling of cooperation which carried on to the time of his separation from the *INSTITUTE*.

At the second meeting we had the not-too-frequent experience of an address by a member of the Chapter.

Dr. Eduard Farber, discussing National Science Legislation, reviewed the varied proposals before Congress. He came up with the basic thought that such legislation should be aimed at preserving peace through science, not at developing techniques and products that can be handled by industry. The ideas he presented became the basis of a statement sent by the Chapter to members of the Senate Committees on Military Affairs and Commerce. These committees had held joint hearings on the subject, and our statement was for the purpose of ensuring attention to what we believe should be its prime features. Dr. Farber's original presentation subsequently appeared in *THE CHEMIST*.

## CHAPTERS

Since many of our members are employed by the federal government, the Chapter took special interest in a talk at the third meeting on the Scientific Civil Service. Dr. M. H. Trytten of the National Research Council, chairman of an Interdepartmental Committee dealing with the government's personnel problems, outlined deficiencies in the present system and discussed proposed reforms. It is worth reporting that all branches of the government agree upon the need for upgrading chemists and other scientists to a level that will attract the nation's foremost workers.

Dr. Lawrence Flett of the Allied Chemical and Dye Corporation spoke at the fourth meeting on Postwar Problems in Research. The views of industry respecting technical trends in the future were received with much interest.

In addition to Dr. Farber's article, *THE CHEMIST* carried an article by another Chapter member. This was by L. N. Markwood and was entitled "Current Statistical References on Chemicals". If present plans materialize, industry will be assisted in market research problems by a new service that will contain references to all chemical statistics originating within the government.

A significant feature of our meetings has been the dinner preceding the formal session. While pre-meeting dinners have been held many

times in the past, they were a regular occurrence throughout this season and brought about a convivial spirit relished by all those present. Each outside speaker has been a guest of the Chapter on these occasions.

Attendance at the meetings, which can not be said to have been entirely satisfactory, constitutes an open problem. Although the Chapter numbers some 125 members, many are located a considerable distance from Washington and many of the others choose to remain inconspicuous. Thanks to a reliable "old guard" which regularly supported Chapter activities, our work has gone forward. To these loyal members, which include the several women of the Chapter, the officers are grateful. To the inactive members we send the message that even small participation will return much satisfaction at trifling cost.

The president of the Chapter desires to acknowledge the excellent services of fellow-officers and committee members. He would also record a feeling of appreciation for our national president, Dr. Gustav Egloff, under whose banner it has been a pleasure to serve.

Respectfully submitted,  
LOUIS N. MARKWOOD,  
President.

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